

CLAIMS

1. A chimeric, humanized, or human anti-human CD20 monoclonal antibody containing human IgG3 constant domains.
2. The monoclonal antibody of Claim 1, wherein the variable heavy and light regions of said antibody have the are those of RITUXAN®.
3. The monoclonal antibody of Claim 1, wherein the complementarity determining regions of said antibody are derived from the variable heavy and variable light sequences of RITUXAN®.
4. The antibody of Claim 1 which is a human monoclonal antibody.
5. The antibody of Claim 1 which is a chimeric monoclonal antibody.
6. The antibody of Claim 1 which is a humanized monoclonal antibody.
7. The monoclonal antibody of Claim 1 wherein at least one of the amino acid residues of said IgG3 constant domains are substituted with other amino acid residues to enhance *in vivo* half life, ADCC activity, CDC activity or apoptosis activity.
8. A monoclonal antibody according to Claim 1 which possesses at least one of the characteristics:
 - exhibits at least 25% the apoptosis activity of RITUXAN®;
 - exhibits at least 25% the CDC activity of RITUXAN®;
 - exhibits at least 25% the ADCC activity of RITUXAN®; and
 - exhibits at least 25% the B cell depletion activity of RITUXAN®;

wherein each of said activities is evaluated by comparing the same design of said monoclonal antibody to RITUXAN® under identical conditions.

9. A method of modulating, deleting or depleting CD20 positive expressing cells in a subject in need of such treatment comprising administering an effective amount of a monoclonal antibody according to Claim 1.

10. The method of Claim 9 wherein said CD20 positive cells are B cells.

11. The method of Claim 9 wherein said CD20 positive cells are malignant or premalignant B cells.

12. The method of Claim 9 wherein said CD20 positive cells are B cell lymphoma or B cell leukemia cells.

13. A method of therapy which comprises the depletion of B cells, wherein depletion occurs at least partially via ADCC, CDC activity and/or apoptosis ("programmed cell death") comprising administering an effective amount of a monoclonal antibody according to Claim 1.

14. A method of treating a B cell malignancy comprising administering a therapeutically effective amount of a monoclonal antibody according to Claim 1.

15. The method of Claim 14 wherein said B cell malignancy is a B cell lymphoma or leukemia.

16. The method of Claim 15 wherein said B cell malignancy is a non-Hodgkin's lymphoma or chronic lymphocyte leukemia.

17. A method of inhibiting humoral immunity in a subject in need of such suppression comprising administering an effective amount of an antibody according to Claim 1.

18. A method of treating an autoimmune disease comprising administering a therapeutically effective amount of a monoclonal antibody according to Claim 1.

19. The method of Claim 18 wherein said autoimmune disease is selected from the group consisting of lupus, rheumatoid arthritis and ITP.

20. A method of suppressing a B cell mediated immune response to an antigen comprising administering an effective amount of a monoclonal antibody according to Claim 1.

21. The method of Claim 20 wherein said antigen is selected from the group consisting of a transplantation antigen, therapeutic antibody, allergen, or autoantigen.

22. The method of Claim 20 which is used in a transplantation regimen.

23. The method of Claim 20 which is used to suppress a humoral immune response to an administered therapeutic agent.

24. The method of Claim 23 wherein said agent is a therapeutic protein or polypeptide.

25. The method of Claim 24 wherein said therapeutic protein is an antibody, antibody fragment, hormone, enzyme, or cytokine.